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REMARKS

Claims 1, 3, 10-12, 29, 31-35, 37 and 40-46 are pending in the application. Claims 1, 3, 10-12, 29, 31, 32, 31-35, 37 and 40-46 stand rejected as being unpatentable under 35 U.S.C. § 103(a) over U.S. Patent Publication No. 2004/0161623 ("Domine") in view of U.S. Patent No. 4,079,850 ("Suzuki") and either U.S. Patent 3,233,416 ("Rainwater") or U.S. Patent 3,450,805 ("Chesser") further in view of U.S. 3,116,877 ("Moslo") as applied to claims 33, 34 and 40 and further in view of U.S. Patent 6,071,463 ("De'ath"). Reconsideration is respectfully requested in light of the foregoing claim amendments and the following remarks.

In order to expedite prosecution, Claims 1 and 31-32 have been canceled. Claim 33, formerly dependent on Claim 1, has been amended and is now an independent claim that incorporates the recitation of former Claim 1 and the limitation of original Claim 33. Claims 3, 10-11, 29, 37 and 42-46 have been amended so as to depend on Claim 33. No new matter is introduced by these amendments.

Because Claims 3, 10-12, 29, 37, and 42-46 have now been amended to depend on Claim 33, the claimed invention will be discussed below in reference to Claim 33.

Rejection Under 35 U.S.C. § 103(a) of Claims 1, 3, 10-12, 29, 31, 32, 37 and 42-46 over Domine in view of Suzuki and either of Rainwater or Chesser

Claims 1 and 31-32 have been canceled. Claims 3, 10-11, 29, 37 and 42-46 have been amended so as to depend on Claim 33. Consequently, the rejection under 35 U.S.C. § 103(a) over Domine in view of Suzuki and either of Rainwater or Chesser is not relevant to the currently pending claims and Applicant requests that this rejection be withdrawn.

Rejection Under 35 U.S.C. § 103(a) of Claims 33, 34, and 40 over Domine in view of Suzuki and either of Rainwater or Chesser and further in view of Moslo

It is the Examiner's position that although the other cited references fail to teach "a blow pin that is covered by a cooling jacket or a blow pin with a channel for allowing the escape of gas from the inside [of] the blow molded structure", Moslo

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teaches "a method of blow molding a parison wherein the blow pin is substantially jacketed along its length and is structured and operated to allow for the air to vent back through the nozzle." Applicant believes this view is incorrect for the following reasons.

In a typical extrusion blow molding process, polymer is melted and extruded into a parison (hollow tube). This parison is then captured by enclosing it within a cooled mold. Air is then blown into the parison by action of a blow pin to inflate the parison into the shape of a hollow bottle, container or part. Claim 33 recites an improved extrusion blow molding process, wherein one of the improvements is the incorporation of a blow pin which has (i) a nozzle that fits into the cavity of the parison and (ii) at least 95% of the surface of the blow pin, not inclusive of the nozzle, is covered by a cooling jacket. Using such a structure, a cold gas at a temperature of less than about 5°C can be discharged by the jacketed blow pin into the parison cavity to inflate the parison and, at the same time, cool it from the inside.

Injection blow molding is a combination of injection molding and blow molding. In an injection blow molding process, the molten polymer is first injected into a heated injection mold to form a preform parison molded around a core rod, and then the core rod with the preform parison molded upon it is closed within a cooled blow mold where air is discharged into the preform parison through the core rod to form the final hollow article. The disclosure of Moslo relates to a specific core rod that can be used in an injection blow molding process. For example, Moslo at Col. 2, lines 7-9, teaches that the blow molding machine comprises "central molds" that are "adapted for the injection molding of parisons upon the core rods" and "side molds" that are "adapted to for blow molding the finished article." The "blow pin" cited by the Examiner in reference to Moslo is in fact the core rod (75) and therefore Moslo does not teach the blow pin recited in Claim 33.

Moreover, the structure of the core rod (75) disclosed in Moslo is very different from that of the blow pin recited in Claim 33. Specifically, unlike the blow pin recited in Claim 33, which has at least 95% of its surface, not inclusive of the nozzle, covered with a cooling jacket, the core rod (75) has the preform parison molded thereupon

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during the injection molding step. Therefore, the core rod (75) of Moslo does not have a cooling jacket covers the surface thereof. Core rod (75) has a small tube (198) fitted inside the core rod (75) (Fig 3 of Moslo), wherein water can be passed inwardly through the tube (198) and exhausted through a passage inside the core rod and around the tube. Moslo further teaches that "[b]y controlling the temperature of the water which is passed through the core rod, said core rod is maintained at the desired temperature for injection molding a parison thereupon at the parison mold." Such a structure cannot be used to discharge cold gas into the cavity of the parison. Therefore, the core rod (75) of Moslo functions very differently from the blow pin recited in Claim 33.

Rejection Under 35 U.S.C. § 103(a) of claim 35 over Domine in view of Suzuki and either of Rainwater or Chesser and further in view of Moslo and further in view of De'ath

Claim 35 depends on Claim 33 and further recites that the nozzle (which is fitted inside the cavity of the parison) of the blow pin has a rough surface, thereby further providing the means for allowing the escape of gas from the inside of the blow molded structure. De'ath relates to an injection molding process. In such a process, the injection mold for forming a screw top comprises a central core (6) that sits within an outer mold (8) wherein the central core (6) defines the internal shape a screw top and the inner surface of the outer mold (8) defines the external shape of the screw top and the cavity (9) defined between the core (6) and the outer mold (8) is filled with molten thermoplastic polymer, which is further cooled and solidified. De'ath further teaches (i) ducts (10) provided in the core (6) for discharging pressure air between the core (6) and the cooling polymer and (ii) roughened surface of the core (6) to provide micro-channels through which the air can permeate. Clearly, De'ath is related to a different process, and not only does De'ath fail to teach the structure recited in Claim 35, it does not teach the use of a blow pin at all.

Rejection Under 35 U.S.C. § 103(a) of Claim 40 and 41

Because Claims 40 and 41 have been canceled, this rejection is now moot.

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Applicant believes that in view of the amendments to the claims and for the reasons set forth in the remarks above the present claims define patentable subject matter and requests reconsideration.

Respectfully submitted,



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